

1 We claim:

2 1. A remote control system for controlling a plurality of secure containers, each
3 having a controllable lock mechanism, the system comprising:

4 a) means for inputting a command to enable or disable a particular
5 container;

6 b) a control computer for assembling an instruction operative to enable or
7 disable the particular container in response to the command, the
8 instruction comprising an identifier specific to the particular container;

9 c) transmitting means, operatively connected to the control computer, for
10 conditioning the instruction for wireless transmission and wirelessly
11 transmitting the conditioned instruction to the containers; and

12 d) each container comprising container control means for receiving the
13 transmitted instruction and for enabling or disabling the lock
14 mechanism of that container if the instruction contains the identifier
15 specific to that container.

16 2. The control system as set forth in claim 1 wherein the transmitting means
17 comprises a radio transmitter for modulating the conditioned instruction onto a
18 radio signal and for transmitting the modulated radio signal to the containers
19 from an antenna.

20 3. The control system as set forth in claim 2 wherein the frequency of the radio
21 signal is in the range of 450 Megahertz to 470 Megahertz.

22 4. The control system as set forth in claim 3 wherein the output power of the
23 radio signal radiated from the antenna is in the range of 5 to 30 watts.

24 5. The control system as set forth in claim 1 wherein the container control means
25 of each container comprises:

26 a) a wireless receiver operative for receiving the wirelessly transmitted
27 instruction; and

1 b) means for interpreting the instruction as a command to enable or
2 disable the container.

3 6. The control system as set forth in claim 5 wherein the wireless receiver is a
4 radio receiver operative to receive radio signals in the frequency range of 450
5 Megahertz to 470 Megahertz.

6 7. The control system as set forth in claim 5 wherein the means for interpreting a
7 received instruction comprises a receiver controller, operatively connected to
8 the wireless receiver, for reading the command contained in the instruction
9 and for enabling or disabling the lock mechanism of the container if the
10 instruction contains the identifier specific to that container.

11 8. The control system as set forth in claim 5 wherein each container control
12 means is powered by a battery.

13 9. The control system as set forth in claim 8 wherein;

14 a) the transmitting means is adapted to transmit the instruction to enable
15 or disable the particular container at a predetermined time; and

16 b) the container control means of the particular container is adapted to
17 activate the wireless receiver of that container approximately at the
18 predetermined time to receive the instruction and to deactivate the
19 wireless receiver after the instruction has been received whereby
20 battery life is conserved.

21 10. A remote control system for controlling a plurality of safes, each having a
22 controllable lock mechanism, the system comprising:

23 a) means for inputting a command to enable or disable a particular safe;

24 b) a control computer for assembling an instruction operative to enable or
25 disable the particular safe in response to the command, the instruction
26 comprising an identifier specific to the particular safe;

1 c) transmitting means, operatively connected to the control computer, for
2 conditioning the instruction for wireless transmission and wirelessly
3 transmitting the conditioned instruction to the safes; and

4 d) each safe comprising safe control means for receiving the transmitted
5 instruction and for enabling or disabling the lock mechanism of that
6 safe if the instruction contains the identifier specific to that safe.

7 11. The control system as set forth in claim 10 wherein the safes are hotel in-
8 room safes distributed in the rooms of a hotel.

9 12. The control system as set forth in claim 11 wherein the means for inputting a
10 command to enable or disable a particular safe comprises:

11 a) a hotel property management system;

12 b) a first communications link operatively connecting the control computer
13 to the property management system; and

14 c) means for interpreting a request entered into the property management
15 system as a command to the control computer to enable or disable the
16 particular safe.

17 13. The control system as set forth in claim 11 wherein the means for inputting a
18 command to enable or disable a particular safe comprises:

19 a) a telephone in a hotel room operatively connected to the hotel
20 telephone system, the hotel room comprising the particular safe;

21 b) a first communications link operatively connecting the telephone
22 system to the hotel property management system;

23 c) a second communications link operatively connecting the control
24 computer to the hotel telephone system

25 d) a third communications link operatively connecting the property
26 management system to the control computer; and

1 e) means for interpreting a telephone call made from the hotel room to a
2 predetermined telephone number as a command to enable or disable
3 the particular safe.

4 14. The control system as set forth in claim 10 wherein the transmitting means
5 comprises a radio transmitter for modulating the conditioned instruction onto a
6 radio signal and for transmitting the modulated radio signal to the safes from
7 an antenna.

8 15. The control system as set forth in claim 14 wherein the frequency of the radio
9 signal is in the range of 450 Megahertz to 470 Megahertz.

10 16. The control system as set forth in claim 15 wherein the output power of the
11 radio signal radiated from the antenna is in the range of 5 to 30 watts.

12 17. The control system as set forth in claim 10 wherein the safe control means of
13 each safe comprises:

14 c) a wireless receiver operative for receiving the wirelessly transmitted
15 instruction; and

16 d) means for interpreting the instruction as a command to enable or
17 disable the container.

18 18. The control system as set forth in claim 17 wherein the wireless receiver is a
19 radio receiver operative to receive radio signals in the frequency range of 450
20 Megahertz to 470 Megahertz.

21 19. The control system as set forth in claim 17 wherein the means for interpreting
22 a received instruction comprises a receiver controller, operatively connected
23 to the wireless receiver, for reading the command contained in the instruction
24 and for enabling or disabling the lock mechanism of the safe if the instruction
25 contains the identifier specific to that safe.

26 20. The control system as set forth in claim 17 wherein each safe control means
27 is powered by a battery.

- 1 21. The control system as set forth in claim 20 wherein;
- 2 c) the transmitting means is adapted to transmit the instruction to enable
- 3 or disable the particular safe at a predetermined time; and
- 4 d) the safe control means of the particular safe is adapted to activate the
- 5 wireless receiver of that safe approximately at the predetermined time
- 6 to receive the instruction and to deactivate the wireless receiver after
- 7 the instruction has been received whereby battery life is conserved.
- 8 22. A method for controlling a plurality of secure containers, each having a
- 9 controllable lock mechanism, the method comprising the steps of:
- 10 a) inputting a command to enable or disable a particular container;
- 11 b) assembling an instruction to enable or disable the particular container
- 12 in response to the command, the instruction comprising an identifier
- 13 specific to the specific container;
- 14 c) conditioning the instruction for wireless transmission and wirelessly
- 15 transmitting the conditioned instruction to the containers; and
- 16 d) receiving the transmitted instruction and enabling or disabling the lock
- 17 mechanism of the particular container if the instruction contains the
- 18 identifier specific to that container.
- 19 23. The method as set forth in claim 22 wherein the secure containers are hotel
- 20 in-room safes distributed in the rooms of a hotel.
- 21 24. The method as set forth in claim 23 wherein inputting a command to enable or
- 22 disable a particular safe comprises the steps of:
- 23 a) entering a request to enable or disable a particular safe into the hotel
- 24 property management system;
- 25 b) interpreting the entered request as a command to enable or disable the
- 26 particular safe.

1 25. The method as set forth in claim 23 wherein inputting a command to enable or
2 disable a particular safe comprises the steps of:

3 a) dialing a predetermined telephone number from the telephone in the
4 hotel room containing the particular safe; and

5 b) interpreting the telephone call to the predetermined telephone number
6 as a command to enable or disable the particular safe.

7 26. The method as set forth in claim 23 wherein assembling the instruction to
8 enable or disable the particular safe comprises the steps of:

9 a) receiving the command to enable or disable the particular safe;

10 b) receiving the room number of the hotel room containing the particular
11 safe;

12 c) deriving the identifier of the particular safe from the received room
13 number; and

14 d) combining the identifier and the command into the instruction.

15 27. The method as set forth in claim 23 wherein transmitting the instruction to the
16 safes comprises the steps of:

17 a) conditioning the instruction for modulating a radio signal having a
18 frequency in the range of 450 Megahertz to 470 Megahertz; and

19 b) transmitting the modulated radio signal to the safes from an antenna,
20 the transmitted radio signal having an output power in the range of 5 to
21 30 watts.

22 28. The method as set forth in claim 27 wherein enabling or disabling the
23 particular safe comprises the steps of:

24 a) receiving the transmitted radio signal;

25 b) demodulating the instruction from the radio signal

- 1 c) reading the command contained in the instruction; and
- 2 d) enabling or disabling the lock mechanism of the particular safe if the
- 3 instruction contains the identifier specific to that safe.

4 29. A method for controlling a plurality of secure containers, each having a lock

5 mechanism controlled by a battery-powered control means, the method

6 comprising the steps of:

- 7 a) inputting a command to enable or disable a particular container;
- 8 b) assembling an instruction to enable or disable the particular container
- 9 in response to the command, the instruction comprising an identifier
- 10 specific to the specific container;
- 11 c) conditioning the instruction for wireless transmission and wirelessly
- 12 transmitting the conditioned instruction to the containers; and
- 13 d) receiving the transmitted instruction and enabling or disabling the lock
- 14 mechanism of the particular container if the instruction contains the
- 15 identifier specific to that container.

16 30. The method as set forth in claim 29 wherein conserving the life of the battery

17 comprises the steps of:

- 18 a) transmitting the instruction to enable or disable a particular container at
- 19 a predetermined time;
- 20 b) activating the wireless receiver of the particular container
- 21 approximately at the predetermined time to receive the instruction; and
- 22 c) deactivating the wireless receiver of the particular container after the
- 23 instruction has been received whereby battery life is conserved.

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